REMARKS

In the Office Action mailed August 5, 2004, claims 1-10 were rejected as being obvious over U.S. Patent No. 5,457,796 to Thompson in view of U.S. Patent No. 5,628,005 to Hurvig. The rejection, however, is unwarranted in view of the amendments to the claims and the systems disclosed in both Thompson and Hurvig.

The MPEP sets forth the following requirements for establishing a *prima facie* case of obviousness:

ESTABLISHING A *PRIMA FACIE* CASE OF OBVIOUSNESS

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). See MPEP § 2143 - § 2143.03 for decisions pertinent to each of these criteria.

MPEP § 2142. As is discussed in detail below, the Thompson and Hurvig references do not teach all the limitations of the rejected claims. The combination of these two references thus does not establish a *prima facie* case of obviousness over the rejected claims.

Turning to amended claim 1 of the present application, this claim is directed to a storage device comprising a processor and a computer interface, a network interface, and a storage means, each communicably connected to the processor. The processor has read and write access to the storage means and has access to files on a file server via the network interface. Upon receipt of a file request from the computer, the processor follows the sequential chain of actions recited in the claim. First, the processor determines whether the file is cached on the storage means. If the file is

cached on the storage means, it is provided to the computer on a read-only basis. Second, if the file is not cached on the storage means, the processor requests the file from the file server. If the file is available from the file server, it is obtained, cached on the storage means, and provided to the computer on a read-only basis. Third, if neither of the first two conditions can be met, the processor returns a file unavailable notice to the computer. The combination of Thompson in view of Hurvig does not disclose all of these limitations.

The first and most distinct difference between Thompson and the invention of amended claim 1 is the subject matter of each. Where amended claim 1 is directed toward a storage *device*, Thompson is directed toward a file *system*. The file system of Thompson includes several shared components, each of which is implemented to achieve full operation of the disclosed file system. Referring to Fig. 5, these components include a file server 503, a random access read/write mass storage device 507, and a random access write once read many (WORM) device 511. Notably, where amended claim 1 includes the limitation of a processor which is communicably connected to a file server via the network interface, Thompson only describes a file server and does not disclose a separate processor in communication therewith. This distinction is important. In amended claim 1, the processor acts as the gatekeeper of information being provided to the computer, and under certain circumstances that information originates from the filer server. In contrast, the file server disclosed in Thompson acts as the gatekeeper and as the originator of information that is provided to the computer.

Further, Thompson does not disclose a processor having read/write access to a mass storage device and which provides files to a computer on a read-only basis upon request. Assuming, *arguendo*, that the read/write mass storage device disclosed in Thompson may be configured as a read-only device to a computer and as a read/write device to a separate processor, Thompson does not disclose the claimed limitation of the processor requesting the file from the file server if the file is not cached on the mass

storage device. Thompson appears to follow the common convention of returning a file not found notice if a file is not found on one of the mass storage devices. Thompson thus fails to disclose all the claimed limitations.

Additional differences between the file system of Thompson and the storage device of amended claim 1 abound. The file server 503 of Thompson controls the operation of the two random access devices 507, 511. Column 10, lines 53-57. Each storage device is divided into blocks of the same size, the blocks making up the storage elements (SE) of the devices, i.e., the locations where data is actually stored. Column 10, lines 59-62. SE's on each storage device fall into one of three categories: "read/write", "read-only", and "unused". A correspondence between SE's on each of the two storage devices is maintained as a map 603 in the virtual memory of the file server 503. Column 12, lines 40-49.

SE's which are designated "read-only", whether on the read/write mass storage device 507 or the WORM device 511, are "inalterable components of the file system 101; they may be read but neither written nor removed from file system 101." Col. 3, ll. 33-36. Furthermore, all SE's on the WORM device 511 are designated "read-only" after data is initially written to any SE (the "WORM" acronym arises from the designation "write once, read many"). The file system disclosed in Thompson thus does not disclose the limitation of amended claim 1 that the processor is "adapted to have read and write access to the storage means" because Thompson requires that the file system is limited to "read-only" access to certain SE's of the storage devices.

Data written to the WORM device 511 in Thompson can not be erased. Rather, the file server 503 "updates" the system by writing modified replacement data to a different physical location on the WORM device 511 and refreshing the map 603 to update the correspondence between the SE's of the WORM device and the SE's of the mass storage device 503. Using this method, when the WORM device reaches full capacity, additional information cannot be written to it and it must be replaced. Such a

significant shortcoming is addressed by the device of amended claim 1 because the processor has read and write to the storage means.

The SE's of the mass storage device 507 disclosed in Thompson may fall into any one of the three categories. The map 603 stores information regarding how the SE's of the mass storage device 507 are divided among the categories. SE's that fall into the "read/write" category are "alterable components of file system 101; they may be added to file system 101, written to, read from, and removed from files system 101." Col. 3, II. 36-40. Thompson thus discloses that SE's designated "read/write" are fully writeable at all times. This teaching is completely opposite of the limitation of amended claim 1 that the processor is adapted to "provide the file to the computer on a read-only basis".

Turning to Hurvig, a file allocation system is described for "providing opportunistic file access in a network environment." In this system, a computer requests a file directly from a file server, and the file server grants access to the file depending upon the availability of the file. The type of access granted may be read/write or read-only, depending upon the users' privileges and the status of the file. Column 9, lines 4-30. Hurvig thus does not disclose a processor as an intermediary between the computer and the file server nor the processor providing the file to the computer on a read-only basis.

Furthermore, in the system described by Hurvig, the local computer may obtain read/write access to a requested file on the file server. Under this system, the local computer may alter a file and write the modified file back to the file server. If the file is altered maliciously (e.g., by a virus), then the modified file on the server can adversely effect other computers that obtain that same file from the file server. In contrast, amended claim 1 includes the limitation that the processor provides the file to the local computer on a read-only basis, thus effectively removing the risk of infecting other computers on a system that is inherent in the system disclosed by Hurvig.

For the above reasons, the combination of Thompson in view of Hurvig does not establish a *prima facie* case of obviousness over amended claim 1.

Claims 2 and 3 each depend from claim 1. Where the combination of Thompson in view of Hurvig does not establish a *prima facie* case of obviousness over amended claim 1, that combination also does not render these dependent claims obvious.

Amended claim 4 is directed toward a computer network. The network includes a file server, a network server, a computer communicably connected to the network server, and a storage device communicably connected to the file server and to the computer. Neither Thompson nor Hurvig disclose such an arrangement for serving files to the computer. In addition, amended claim 4 includes the limitations of a processor within the storage device providing "the file to the computer on a read-only basis", the processor having read and write access to the storage means within the storage device, and the processor requesting the file from the file server if the file is not cached on the storage means. For the same reasons discussed above in reference to amended claim 1, the combination of Thompson and Hurvig do not teach these limitations and thus do not establish a *prima facie* case of obviousness over amended claim 4.

Claims 5 and 6 each depend from claim 4. Where the combination of Thompson in view of Hurvig does not establish a *prima facie* case of obviousness over amended claim 4, that combination also does not render these dependent claims obvious.

Claim 7 is directed toward a method of providing a file to a computer and was also rejected over the combination of Thompson and Hurvig. The method of claim 7 includes the limitation that the storage device acts as an intermediary between the computer requesting the file and a file server if the file is not cached on the storage means of the storage device. As discussed above in reference to amended claim 1, the combination of Thompson and Hurvig do not teach this limitation and thus do not establish a *prima facie* case of obviousness over claim 7.

Claims 8 and 9 each depend from claim 7. Where the combination of Thompson in view of Hurvig does not establish a *prima facie* case of obviousness over amended claim 7, that combination also does not render these dependent claims obvious.
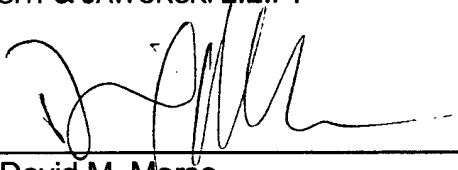
Claim 10 is directed toward a method of providing updated files to a computer and was also rejected over the combination of Thompson and Hurvig. Claim 10 includes the limitation of a storage device retrieving a requested file from a server, caching the retrieved file within the storage device, providing the computer access to the file on a read-only basis, receiving a notice from the file server that an updated version of the file exists, and subsequently deleting the cached copy of the file. Neither Thompson nor Hurvig address the issue of updating files, let alone in the manner claimed. Thompson and Hurvig also do not disclose a storage device acting as an intermediary between a computer and a server. For these reasons, the combination of Thompson and Hurvig do not teach all the limitations of claim 10 and thus do not establish a *prima facie* case of obviousness over claim 10.

For the reasons stated above, Applicant hereby requests reconsideration of the rejected claims.

Respectfully submitted,

FULBRIGHT & JAWORSKI L.L.P.

DATE: <u>October 15, 2004</u>   By: _____
David M. Morse
Reg. No. 50,505

Fulbright & Jaworski L.L.P.
865 South Figueroa Street
Twenty-Ninth Floor
Los Angeles, California 90017-2576
(213) 892-9200